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EXAMINER

HOPKINS, ROBERT A

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,469

Applicant(s)

KEEFER ET AL.

Examiner

Robert A Hopkins

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 50-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restriction

Applicant's election with traverse of Group I, claims 1-49 in Paper No. 5 is acknowledged.

The traversal is on the grounds that the features of the compressor, as defined by the group II claims are not required for the suggested task of changing the pressure of separate gas flows and sending the separate gas flows to a filter apparatus. This is not found persuasive because the combination of a stator, rotor, and centrifugal turbomachinery in claim 1 does not require the specific centrifugal compression machine with double sided impeller of claim 50. Examiner notes that there is no recitation in claim 50 to a rotor, rotor flow paths, or exposing different rotor flow paths to different pressures, therefore there is no link between claim 50 and claim 1. Therefore, examiner respectfully submits that a search for the combination of a stator, rotor, and centrifugal turbomachinery does not include a search for a double sided impeller. The search for group II is specific to another class and subclass and hence is outside the search for group I.

The traversal is also on the grounds that examiner's suggested use of the mixing nozzle does not take into account the purpose of the nozzle, which is to recover energy from the expansion of the separate gas streams, such energy then being used to power the pressure swing absorption system, as described in the specification and group I claims. Applicant also notes that the nozzle covered by the group III claims would be overly complex for the utility suggested by the Examiner. This is not found persuasive because the combination of a stator, rotor, and centrifugal turbomachinery in claim 1 does not require the specific gas mixing nozzle of claim 56. Examiner notes that there is no recitation in claim 56 to a rotor, rotor flow paths, or exposing different rotor flow paths to different pressures, therefore there is no link between claim 56 and claim 1. Examiner notes that applicant's argument that the nozzle would be overly complex for the utility suggested by examiner seems to be speculative and does not provide

provide evidence for reversal of the restriction requirement. The search for group III is specific to another class and subclass and hence is outside the search for group I.

The traversal is also on the grounds that the subject matter of the group III claims is configured for use with the subject matter of the group II claims. Applicants note that the nozzle covered by the group III claims is configured for use with a centrifugal compression machine. This is not found persuasive because there is no recitation in claim 56 of the gas mixing nozzle being in flow communication with a centrifugal compression machine, and specifically in flow communication with the centrifugal compression machine having a double sided impeller as recited in claim 50. Therefore, examiner respectfully submits that the subject matter of the group III claims is not related to the subject matter of the group II claims, and the search for group III is specific to another class and subclass and hence is outside the search for group II.

The requirement is still deemed proper and is therefore made FINAL.

This application contains claims 50-60 drawn to an invention nonelected with traverse in Paper No. 6. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 214(impeller channels; page 11 line 31). Correction is requested.

Claim Rejections - 35 U.S.C. § 112

Claims 23-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 23 and 28 line 1 recite "the split stream centrifugal vacuum pump". There is a lack of antecedent basis for "the split stream centrifugal vacuum pump" in previous

Art Unit: 1724

claim limitations. Correction is requested. Claims 24-27 depend on claim 23 and hence are also rejected. Claims 29 and 30 depend on claim 28 and hence are also rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-34 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Keefer et al(6451095).

Keefer et al teaches a gas separation system for separating a feed gas mixture comprising a first gas component and a second gas component, the gas separation system comprising a stator(14), including a first stator valve surface , a second stator valve surface, and a plurality of function compartments opening into the stator valve surface, and a plurality of function compartments opening into the stator valve surfaces; a rotor(11) rotatably coupled to the stator, and including a first rotor valve surface(21) in communication with the first stator valve surface, a second rotor valve surface in communication with the second stator valve surface, and a plurality of rotor flow paths for receiving adsorbent material therein preferentially adsorbing the first gas component in response to increasing pressure in the rotor flow paths in comparison to the second gas component, each rotor flow path including a pair of opposite ends opening into the

Art Unit: 1724

rotor valve surfaces for communication with the function compartments; and centrifugal turbomachinery(201,221 in figure 21) coupled to a portion of the function compartments and including an impeller(see figure 28; column 25 lines 27-28, lines 35-45) having a plurality of impeller flow paths for exposing each rotor flow path to a plurality of different pressure between an upper pressure and a lower pressure as the rotor rotates for separating the first gas component from the second gas component. Keefer et al further teaches wherein the centrifugal turbomachinery includes a split stream centrifugal compressor and a split stream centrifugal expander coupled together. Keefer et al further teaches impeller blades extending different radial distances from an axis of rotation of the impeller. Keefer et al further teaches diffuser inlet, diffuser outlets, and diffuser flow paths between the diffuser inlet and diffuser outlets. Keefer et al further teaches a light reflux expander(220; figure 13) coupled to a compressor(322)

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

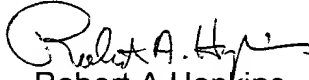
Claims 1-49 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-49 of prior U.S. Patent No. 6398853. This is a double patenting rejection.

Art Unit: 1724

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A Hopkins whose telephone number is 703-308-3913. The examiner can normally be reached on Monday-Friday 9:00am-3:00pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Simmons can be reached on 703-308-1972. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9572 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Robert A Hopkins
Primary Examiner
Art Unit 1724

rah
February 5, 2003